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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,437	02/26/2002	Michael L. Friedman	O-3989	6465

7590 07/30/2003  
Jeffrey C Lew  
2205 Silverside Road  
Wilmington, DE 19810

EXAMINER

ZACHARIA, RAMSEY E

ART UNIT	PAPER NUMBER
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1773

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DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Office Action Summary**

Application No.

10/083,437

Applicant(s)

FRIEDMAN ET AL.

Examiner

Ramsey Zacharia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

1. Claims 9, 10, and 11 are objected to because of the following informalities: these claims are presented together in one paragraph. Each claim should start on its own line. Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1 and 3-11 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for laminates comprising polyurethane having a Shore D hardness of greater than about 70, does not reasonably provide enablement for laminates comprising polyurethane having a Shore D hardness outside this range. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Page 9, lines 16-18 of the instant specification state that "[i]t is necessary that the polyurethane layer has a Shore D hardness greater than about 70." However, the claims as written are not limited to polyurethane layers having a Shore D hardness greater than about 70 but are open to the use of polyurethane layers having any Shore D hardness.

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***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman et al. (U.S. Patent 5,908,704) in view of Ishikawa et al. (U.S. Patent 5,061,333).

Friedman et al. teach a protective glazing laminate comprising at least two glazing layers and one fluoropolymer interlayer (column 2, lines 30-36). The fluoropolymer is exposed to corona discharge in an atmosphere comprising an organic compound (column 2, lines 39-45). In the embodiment of Example 13, the organic compound is acetone (column 13, lines 11-25). The laminate is made by adhering the glazing and fluoropolymers layers under heat and pressure (column 8, lines 40-53). Suitable materials for the glazing layers include glasses and polycarbonate (Examples 13-15 and column 6, lines 18-28). The fluoropolymer interlayer may comprise a blend of THV and FEP having a haze of less than 4% (column 3, lines 43-44). Preferably, the thickness of the fluoropolymer layer is 5 to 40 mils (column 5, lines 30-33). Regarding claim 11, the glazing laminate of Example 12 comprises two glass plates and two fluoropolymer layers wherein the fluoropolymer layers are adjacent to each other and both reside between the two glass layers (column 12, line 58-column 13, line 7).

The glass and polycarbonate layers of Friedman et al. are taken to have a high modulus since modulus is a material property and Friedman et al. uses the same materials as are used in the instant invention.

Regarding claim 10, while Friedman et al. do not illustrate an embodiment wherein the glazing laminate comprises three glazing layers with fluoropolymer layers in between each of them, Friedman et al. do teach that their laminate comprises at least two glazing layers. This implies that the laminate may comprise more than two glazing layers. Furthermore, Friedman et al. refer to the fluoropolymer layer as an interlayer, i.e. the layer is disposed between the glazing layers, that bonds the glazing layers together.

Therefore it would be obvious to one of ordinary skill in the art to use more than two interlayers in applications where additional protection is required. Moreover, it would be obvious to dispose fluoropolymer layers between each of the glazing layers to adhere the all the layers together and improve the impact and fire resistance of the laminate.

Friedman et al. do not teach embossing the fluoropolymer layer.

Ishikawa et al. is directed to laminated glass comprising two glass sheets bonded by a polymer interlayer (column 2, lines 17-38). In addition to corona treatment, the polymer layer is embossed to facilitate and ensure adequate deaeration during press-bonding (column 3, lines 46-54).

One of ordinary skill in the art would be motivated to emboss the fluoropolymer layer of Friedman et al. to ensure adequate deaeration during formation of the laminate.

Therefore, the inventions of claims 1-11 would have been obvious to one of ordinary skill in the art at the time the inventions were made.

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*Conclusion*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (703) 305-0503. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau, can be reached on (703) 308-2367. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 for non after-final correspondences and (703) 872-9311 for after-final correspondences.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Ramsey Zacharia

Primary Examiner

Technology Center 1700

7/23/03